



Economic and Social Council

Distr.
GENERAL

E/CN.16/1993/8
12 March 1993

ORIGINAL: ENGLISH

Commission on Science and Technology
for Development
First session
12-23 April 1993
Item 6 (a) of the provisional agenda*

SCIENCE AND TECHNOLOGY FOR SUSTAINABLE DEVELOPMENT: SCIENTIFIC
AND TECHNOLOGICAL IMPLICATIONS OF SUSTAINABLE DEVELOPMENT

Implications of the outcome of the United Nations Conference on
Environment and Development, including Agenda 21, for the work
of the Commission on Science and Technology for Development

Note by the Secretary-General

SUMMARY

The present note provides, for consideration of the Commission on Science and Technology for Development, implications arising from Agenda 21 1/ (adopted at the United Nations Conference on Environment and Development) for the work of the Commission. In conformity with the mandate and the functions of the Commission, this note takes into account substantive as well as coordination implications.

* E/CN.16/1993/1.

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I. BACKGROUND

1. At its 19th plenary meeting, the United Nations Conference on Environment and Development, held in Rio de Janeiro, Brazil, from 3 to 14 June 1992, adopted the Rio Declaration on Environment and Development, 2/ a comprehensive programme of action called Agenda 21 1/ and the Non-legally Binding Authoritative Statement of Principles for a Global Consensus on the Management, Conservation and Sustainable Development of All Types of Forests. 3/ In addition, the United Nations Framework Convention on Climate Change and the Convention on Biological Diversity were opened for signature at the Conference.

2. In its resolution 47/190, the General Assembly took note with satisfaction of the report of the United Nations Conference on Environment and Development, 4/ and endorsed the Rio Declaration on Environment and Development, Agenda 21 and the Non-legally Binding Authoritative Statement of Principles for a Global Consensus on the Management, Conservation and Sustainable Development of All Types of Forests. In the same resolution, the Assembly urged Governments, organs, organizations and programmes of the United Nations system as well as other intergovernmental and non-governmental organizations to take the necessary action to give effective follow-up to the Rio Declaration on Environment and Development, Agenda 21 and the Non-legally Binding Authoritative Statement of Principles for a Global Consensus on the Management, Conservation and Sustainable Development of All Types of Forests. To this end, the Secretary-General, in paragraph 36 of his report on "Institutional arrangements to follow up the United Nations Conference on Environment and Development" (A/47/598), stressed the need to review and adjust the biennial work-plans of all subsidiary bodies of the Economic and Social Council, particularly those that had a clear mandate vis à vis certain chapters of Agenda 21, in order to respond to Agenda 21 requirements and to focus more sharply on the evolving concept of sustainable development.

3. Agenda 21 provides additional guidelines to Member States for developing science and technology policies and programmes that take into account the need for a balanced and integrated approach to environment and development. Science and technology is identified throughout Agenda 21 as an essential means to achieve sustainable development objectives in all countries.

4. A considerable number of chapters of Agenda 21 address specific science and technology-related provisions. In addition, the following two chapters deal exclusively with these important issues:

Chapter 34: Transfer of environmentally sound technology, cooperation and capacity-building

Chapter 35: Science for sustainable development

5. The Commission on Science and Technology for Development discharges specific functions in providing the Economic and Social Council with high-quality advice in the areas of science and technology, through analysis and the provision of appropriate policy recommendations or options. With respect to accomplishing those functions, the Economic and Social Council, in its resolution 1992/62, requested the Commission, as well as the other new

subsidiary bodies, to make recommendations, at its first session, about its future work programme, taking into account its respective mandate and the follow-up of the relevant provisions of Agenda 21.

II. IMPLICATIONS OF AGENDA 21 FOR THE WORK OF THE COMMISSION ON SCIENCE AND TECHNOLOGY FOR DEVELOPMENT

6. The general orientation for the work of the Commission on Science and Technology for Development evolves from its functions, namely:

(a) To assist the Economic and Social Council in providing science and technology policy guidelines and recommendations to Member States, particularly developing countries;

(b) To provide innovative approaches to improving the quality of coordination and cooperation in the area of science and technology within the United Nations system, with a view to ensuring optimum mobilization of resources;

(c) To support, within the mandate of the Commission on Science and Technology for Development, the Commission on Sustainable Development that was to be established in accordance with the arrangements set forth in chapter 38 of Agenda 21.

7. In providing recommendations for its future work programme, the Commission on Science and Technology for Development should take into account as an additional guideline Programme 17, entitled "Science and technology for sustainable development", of the revised medium-term plan for the period 1992-1997 (A/47/6 (Prog. 17)).

A. Substantive implications

8. Implementation of Agenda 21 should be based on an action- and result-oriented approach. In providing recommendations for the future work programme of the Commission on Science and Technology for Development, which takes into account its mandate and the science and technology-related provisions of Agenda 21, the Commission should consider the following areas:

(a) Technology transfer and cooperation;

(b) Endogenous capacity-building in science and technology;

(c) Technology assessment in support of the effective management of technologies;

(d) Science for sustainable development.

9. Activities under the work area technology transfer and cooperation should be designed to assist Member States in the formulation of policies and programmes that promote and facilitate access to and transfer of environmentally

sound technologies, in particular to developing countries. Specific activities should include:

(a) Undertaking country/case-studies to assess the validity of barriers to access to and transfer of environmentally sound technologies, particularly to developing countries. (Most of the technology transfer studies that are conducted suggest their own barriers. There is a lack of solid knowledge about the barriers that are real and those that are perceived. Both categories are important, as perceived barriers can be as important in economic decision-making as real ones.);

(b) Examining existing and new policy tools available to suppliers and recipients of technologies, including subsidies, fees and taxes, fiscal instruments, technological benchmarking for the purpose of achieving environmental excellence, and rational pricing of resources, to determine whether they encourage or impede access to, and transfer and introduction of, environmentally sound technologies.

10. Activities under the work area Endogenous capacity-building in science and technology should be designed to assist Member States, in particular developing countries, in building the endogenous capacities needed to make appropriate decisions on science and technology options that are most suitable to those countries' needs and priorities. The objective of this programme area coincides with the overall objective of Programme 17 (para. 17.2) of the revised medium-term plan for the period 1992-1997, namely, to assist Member States, particularly developing countries, in developing endogenous capacities for designing science and technology policies and in assessing the potential of new technologies. Specific activities should include:

(a) Carrying out national policy dialogues to build a broad consensus on the use of science and technology options that are most suitable to countries' needs and priorities;

(b) Developing sustainable mechanisms for decision-making in science and technology.

11. Activities under the work area Technology assessment in support of the management of technologies should assist Member States, particularly developing countries, in building their capabilities for technology needs assessment. Specific activities should include:

(a) Building technology assessment capabilities for the management of technologies, including environmental risk assessment;

(b) Strengthening the international network of regional, subregional and national technology assessment institutions.

12. Activities under the work area Science for sustainable development should aim at improving the capacities of Member States, particularly developing countries, to generate scientific knowledge and technical know-how consistent with the countries' conditions and needs in the areas of environment and development. Specific activities should include:

(a) Substantiating the concepts of environmentally sound technology and sustainable development, taking into account the specific conditions and needs of developing countries;

(b) Assisting developing countries in determining priorities in scientific research and technological development that are consistent with long-term sustainable development objectives.

B. Coordination implications

13. The Commission should also review for its future work the relevant recommendations and proposals on international institutional arrangements to follow up the United Nations Conference on Environment and Development as contained in chapter 38 of Agenda 21. Those recommendations and proposals should be reviewed with respect to the coordinating function of the Commission in the area of science and technology within the United Nations system as well as its effective interaction with the Commission on Sustainable Development.

14. Improving the quality of coordination and cooperation with the other organs of the Economic and Social Council in the area of science and technology should not be seen simply as a process of avoiding duplication, but rather as a way of achieving synergy. This would be necessary since the implementation of the provisions of Agenda 21, particularly in developing countries, will have implications for the work programme of the agencies, organizations and organs of the United Nations system.

15. In conformity with its own functions and those of the Commission on Sustainable Development (as set forth in General Assembly resolution 47/191), the Commission on Science and Technology should determine specific organizational modalities for its interaction with the Commission on Sustainable Development. This would, inter alia, ensure the effective monitoring and reviewing of progress in the implementation of the science and technology-related provisions of Agenda 21 throughout the United Nations system.

Notes

1/ Report of the United Nations Conference on Environment and Development, Rio de Janeiro, 3-14 June 1992, vol. I, Resolutions Adopted by the Conference (United Nations publication, Sales No. E.93.I.8 (vol. I)), resolution I, annex II.

2/ Ibid., annex I.

3/ Ibid., annex III.

4/ Ibid., vols. I, II and III (United Nations publication, Sales No. E.93.I.8).
